Comments on Petition RM-11306

Concerning Amendment of Part 97 Rules
to regulate the Amateur Radio High
Frequency Allocations by Necessary
Bandwidth rather than by Mode

The concept of regulating the Amateur Radio wavelengths by necessary bandwidth rather than by mode is a sensible idea, and I believe that the Federal Communications Commission should give the petition filed by the ARRL serious consideration.

There are, however, a few specifics of the ARRL petition that are not well thought out. First, I am opposed to permitting semi-automatic RTTY or data operation on any frequency authorized for such emission type's bandwidth. "Semi-automatic" station operation is defined in 97.221 (c)(1) as:

"The station is responding to interrogation by a station under local or remote control."

Under the current rules (97.221)(c), this type of semi-automatic station operation is permitted in any data segment if it occupies a bandwidth of less than 500 Hz. The ARRL's petition would remove this bandwidth restriction, and permit semi-automatic station operation in any segment for which the used mode's "necessary bandwidth" would allow it.

I believe that the type of operation descibed by 97.221(c) should be permitted only within the same segments as fully automatic operation, though I believe these segments should be widened to accommodate the increased level of interest in semi-automatic operation. The reason why semi-automatic operation is incompatible with traditional interactive High Frequency activity is because of the existence of "skip zones" on the HF wavelengths. The "ARRL Handbook for Radio Communications" (2003 edition) describes skip zones (p 21.8):

The term skip zone is closely related to MUF (Maximum Usable Frequency). When two stations are unable to

communicate with each other on a particular frequency
because the ionosphere is unable to refract the signal
from one to the other through the required angle -
that is, the frequency is below the MUF - the stations
are said to be in the skip zone for that frequency.

So this means, in effect, that two stations 200 miles apart may be unable to hear each other, but both are able to hear other stations 800 or 1000 miles away. The two stations are within each other's "skip zone". This means that it is difficult to distinguish if a channel is unoccupied unless one listens to it for some time, and first makes an inquiry about whether the frequency is occupied. A nearby station within ones "skip zone" could be transmitting, but be unheard.

For this reason, "semi-automatic" station operation is not compatible with traditional interactive amateur radio activity, and should be assigned band segments that can be then be avoided by other stations.

Another issue with the ARRLs' petition is the small size of the sub-200Hz bandwidth allocated on the 40 meter band. The size of the sub-200 Hz allocation is only 35 KHz (7000-7035 KHz). During ARRL Field Day 2005 (the most popular on-the-air operating activity in North America), 503,205 contacts of the 1,217,693 completed during the event were made using CW (a sub-200Hz mode), representing about 41.3% of the total activity. 21,766 were made using digital modes, and the bulk (692,722) used phone. Some unknown portion of the 21,766 (1.8%) used PSK31, a sub-200 Hz digital emission type that would naturally share the same allocations with CW. So something approaching 41.5-42% of amateur activity on 40 meters would be packed into 35 KHz of the 300 KHz available on the 40 meter band. That seems like a punitive allocation for some of the most popular modes on HF. A more reasonable segment would be 7000-7065 KHz.

I think also that the time is right to bring the 160 meter band within the "regulation by bandwidth" framework. Currently, activity of any emission type is allowed to operate anywhere within the 160 meter band, and the band is divided according

to "Gentlemen's Agreements", which are described on the ARRL web site on a page titled the "Considerate Operator's Frequency Guide"

http://www.arrl.org/FandES/field/regulations/conop.html.

As an active 160 meter operator, I've observed increased levels of "inconsiderate" activity, in which the above mentioned agreements are ignored. I think this represents the right time to establish 160 meter subbands by "necessary bandwidth", and a reasonable sub-200Hz bandwidth segment of the 200 KHz wide 160m band would be about 50 KHz wide; 1800-1850 KHz.

Thany you for the opportunity to comment.

Respectfully Submitted,

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